STATE OF NEW HAMPSHIRE
INTER-DEPARTMENT COMMUNICATION

DATE: April 25, 2018

FROM: SEJ on behalf of Andrew O'Sullivan
Wetlands Program Manager

AT (OFFICE): Department of Transportation
Bureau of Environment

SUBJECT Dredge & Fill Application
Dixville, 42398

TO Gino Infascelli, Public Works Permitting Officer
New Hampshire Wetlands Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095

Forwarded herewith is the application package prepared by NH DOT Bureau of Bridge Maintenance for the subject major impact project. This project is classified as major per Env-Wt 303.02(p). The project is located on NH Route 26 in the Town of Dixville, NH. The proposed work consists of rehabilitating a 15' span concrete arch bridge by repairing the wingwalls, centerline join, installing riprap along the southern bank, and installing a toe wall along the south abutment.

This project was reviewed at the Natural Resource Agency Coordination Meeting on December 19, 2018. A copy of the minutes has been included with this application package. A copy of this application and plans can be accessed on the Departments website via the following link: http://www.nh.gov/dot/org/projectdevelopment/environment/units/program-management/wetland-applications.htm

Mitigation is not required. The proposed work is needed for the protection of existing infrastructure. NHDOT received concurrence on no mitigation at the December 19, 2018 Natural Resource Agency meeting.

The lead people to contact for this project are Steve Johnson, Administrator, Bureau of Bridge Maintenance (271-3668 or steve.johnson@dot.nh.gov) or Andrew O'Sullivan, Wetlands Program Manager, Bureau of Environment (271-3226 or Andrew.O'Sullivan@dot.nh.gov).

A payment voucher has been processed for this application (Voucher #564743 & #56735) in the amount of $678.80 and $3.40.

If and when this application meets with the approval of the Bureau, please send the permit directly to Andrew O'Sullivan, Wetlands Program Manager, Bureau of Environment.

SEL:sel
Enclosures

cc:
BOE Original
Town of Dixville (4 copies via certified mail)
David Trubey, NH Division of Historic Resources (Cultural Review Within)
Carol Henderson, NH Fish & Game (via electronic notification)
Maria Tur, US Fish & Wildlife (via electronic notification)
Mark Kern, US Environmental Protection Agency (via electronic notification)
Michael Hicks, US Army Corp of Engineers (via electronic notification)
Kevin Nyhan, BOE (via electronic notification)

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NHDES-W-06-012

WETLANDS PERMIT APPLICATION

Water Division/ Wetlands Bureau
Land Resources Management

Check the status of your application: www.des.nh.gov/onestop

RSA/Rule: RSA 482-A/ Env-Wt 100-900

Administrative Use Only	Administrative Use Only	Administrative Use Only	File No.:
			Check No.:
			Amount:
			Initials:

1. REVIEW TIME: Indicate your Review Time below. To determine review time, refer to Guidance Document A for instructions.

☒ Standard Review (Minimum, Minor or Major Impact) ☐ Expedited Review (Minimum Impact only)

2. MITIGATION REQUIREMENT:

If mitigation is required, a Mitigation-Pre Application meeting must occur prior to submitting this Wetlands Permit Application. To determine if mitigation is required, please refer to the Determine if Mitigation is Required Frequently Asked Questions.

Mitigation Pre-Application Meeting Date: Month: 12 Day: 19 Year: 2018

☒ N/A - Mitigation is not required

3. PROJECT LOCATION:

Separate wetland permit applications must be submitted for each municipality within which wetland impacts occur.

ADDRESS: **NH 26 over Flume Brook**			TOWN/CITY: **Dixville**
TAX MAP: **N/A**	BLOCK: **N/A**	LOT: **N/A**	UNIT: **N/A**
USGS TOPO MAP WATERBODY NAME: **Flume Brook** ☐ NA		STREAM WATERSHED SIZE: **2.76 sq. mi.** ☐ NA	
LOCATION COORDINATES (If known): **44` 50' 59.7", 71`16'40.5"**		☐ Latitude/Longitude ☐ UTM ☐ State Plane	

4. PROJECT DESCRIPTION:

Provide a brief description of the project outlining the scope of work. Attach additional sheets as needed to provide a detailed explanation of your project. DO NOT reply "See Attached" in the space provided below.

The proposed project is the rehabilitation of the bridge Dixiville 206/101, which carries NH 26 over Flume Brook. This bridge is a concrete arch that spans 15'. The proposed work is to repair the wingwalls and centerline joint, install riprap along the southern bank, and a toe wall to prevent further undermining of the southern abutment.

5. SHORELINE FRONTAGE:

☒ N/A This does not have shoreline frontage. SHORELINE FRONTAGE:

Shoreline Frontage is calculated by determining the average of the distances of the actual natural navigable shoreline frontage and a straight line drawn between the property lines, both of which are measured at the normal high water line (Env-Wt 101.89).

6. RELATED NHDES LAND RESOURCES MANAGEMENT PERMIT APPLICATIONS ASSOCIATED WITH THIS PROJECT:

Please indicate if any of the following permit applications are required and, if required, the status of the application.

To determine if other Land Resources Management Permits are required, refer to the Land Resources Management Webpage.

Permit Type	Permit Required	File Number	Permit Application Status
Alteration of Terrain Permit Per RSA 485-A:17	☐ YES ☐ NO	____	☐ APPROVED ☐ PENDING ☐ DENIED
Individual Sewerage Disposal per RSA 485-A:2	☐ YES ☐ NO	____	☐ APPROVED ☐ PENDING ☐ DENIED
Subdivision Approval Per RSA 485-A	☐ YES ☐ NO	____	☐ APPROVED ☐ PENDING ☐ DENIED
Shoreland Permit Per RSA 483-B	☐ YES ☐ NO	____	☐ APPROVED ☐ PENDING ☐ DENIED

7. NATURAL HERITAGE BUREAU & DESIGNATED RIVERS:

See the Instructions & Required Attachments document for instructions to complete a & b below.

a. Natural Heritage Bureau File ID: NHB 19 - 0928.

b. ☐ This project is within a Designated River corridor. The project is within ¼ mile of: _____; and date a copy of the application was sent to the Local River Management Advisory Committee: Month: __ Day: __ Year: ____

☒ N/A – This project is not within a Designated River corridor.

8. APPLICANT INFORMATION (Desired permit holder)

LAST NAME, FIRST NAME, M.I.: **NH Dept. of Transportation**

TRUST / COMPANY NAME: **NH Dept. of Transportation** | MAILING ADDRESS: **PO Box 483**

TOWN/CITY: **Concord** | STATE: **NH** | ZIP CODE: **03302**

EMAIL or FAX: **Steve.Johnson@dot.nh.gov** | PHONE: **271-3667**

ELECTRONIC COMMUNICATION: By initialing here: SWJ, I hereby authorize NHDES to communicate all matters relative to this application electronically.

9. PROPERTY OWNER INFORMATION (If different than applicant)

LAST NAME, FIRST NAME, M.I.: **NH Dept. of Transportation**

TRUST / COMPANY NAME: **NH Dept. of Transportation** | MAILING ADDRESS: **PO Box 483**

TOWN/CITY: **Concord** | STATE: **NH** | ZIP CODE: **03302**

EMAIL or FAX: **Andrew.O'Sullivan@dot.nh.gov** | PHONE: **271-3226**

ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize NHDES to communicate all matters relative to this application electronically.

10. AUTHORIZED AGENT INFORMATION

LAST NAME, FIRST NAME, M.I.: | COMPANY NAME:

MAILING ADDRESS:

TOWN/CITY: | STATE: | ZIP CODE:

EMAIL or FAX: | PHONE:

ELECTRONIC COMMUNICATION: By initialing here _____, I hereby authorize NHDES to communicate all matters relative to this application electronically.

11. PROPERTY OWNER SIGNATURE:

See the Instructions & Required Attachments document for clarification of the below statements

By signing the application, I am certifying that:

1. I authorize the applicant and/or agent indicated on this form to act in my behalf in the processing of this application, and to furnish upon request, supplemental information in support of this permit application.
2. I have reviewed and submitted information & attachments outlined in the Instructions and Required Attachment document.
3. All abutters have been identified in accordance with RSA 482-A:3, I and Env-Wt 100-900.
4. I have read and provided the required information outlined in Env-Wt 302.04 for the applicable project type.
5. I have read and understand Env-Wt 302.03 and have chosen the least impacting alternative.
6. Any structure that I am proposing to repair/replace was either previously permitted by the Wetlands Bureau or would be considered grandfathered per Env-Wt 101.47.
7. I have submitted a Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) to the NH State Historic Preservation Officer (SHPO) at the NH Division of Historical Resources to identify the presence of historical/ archeological resources while coordinating with the lead federal agency for National Historic Preservation Act (NHPA) 106 compliance.
8. I authorize NHDES and the municipal conservation commission to inspect the site of the proposed project.
9. I have reviewed the information being submitted and that to the best of my knowledge the information is true and accurate.
10. I understand that the willful submission of falsified or misrepresented information to the NHDES is a criminal act, which may result in legal action.
11. I am aware that the work I am proposing may require additional state, local or federal permits which I am responsible for obtaining.
12. The mailing addresses I have provided are up to date and appropriate for receipt of NHDES correspondence. NHDES will not forward returned

Property Owner Signature	Steve W Johnson Print name legibly	4/25/19 Date

MUNICIPAL SIGNATURES

12. CONSERVATION COMMISSION SIGNATURE

The signature below certifies that the municipal conservation commission has reviewed this application, and:

1. Waives its right to intervene per RSA 482-A:11;
2. Believes that the application and submitted plans accurately represent the proposed project; and
3. Has no objection to permitting the proposed work.

	Print name **legibly**	Date
⇨		

DIRECTIONS FOR CONSERVATION COMMISSION

1. Expedited review ONLY requires that the conservation commission's signature is obtained in the space above.
2. Expedited review requires the Conservation Commission signature be obtained **prior** to the submittal of the original application to the Town/City Clerk for signature.
3. The Conservation Commission may refuse to sign. If the Conservation Commission does not sign this statement for any reason, the application is not eligible for expedited review and the application will be reviewed in the standard review time frame.

13. TOWN / CITY CLERK SIGNATURE

As required by Chapter 482-A:3 (amended 2014), I hereby certify that the applicant has filed four application forms, four detailed plans, and four USGS location maps with the town/city indicated below.

	Print name legibly	Town/City	Date
⇨			

DIRECTIONS FOR TOWN/CITY CLERK:

Per RSA 482-A:3,I

1. For applications where "Expedited Review" is checked on page 1, if the Conservation Commission signature is not present, NHDES will accept the permit application, but it will NOT receive the expedited review time.
2. IMMEDIATELY sign the original application form and four copies in the signature space provided above;
3. Return the signed original application form and attachments to the applicant so that the applicant may submit the application form and attachments to NHDES by mail or hand delivery.
4. IMMEDIATELY distribute a copy of the application with one complete set of attachments to each of the following bodies: the municipal Conservation Commission, the local governing body (Board of Selectmen or Town/City Council), and the Planning Board; and
5. Retain one copy of the application form and one complete set of attachments and make them reasonably accessible for public review.

DIRECTIONS FOR APPLICANT:

1. Submit the single, original permit application form bearing the signature of the Town/ City Clerk, additional materials, and the application fee to NHDES by mail or hand delivery.

14. IMPACT AREA:

For each jurisdictional area that will be/has been impacted, provide square feet and, if applicable, linear feet of impact.

Permanent: *impacts that will remain after the project is complete.*

Temporary: *impacts not intended to remain (and will be restored to pre-construction conditions) after the project is completed.*

Intermittent Streams: *linear footage distance of disturbance is measured along the thread of the channel.*

Perennial Streams/ Rivers: *the total linear footage distance is calculated by summing the lengths of disturbance to the channel and each bank.*

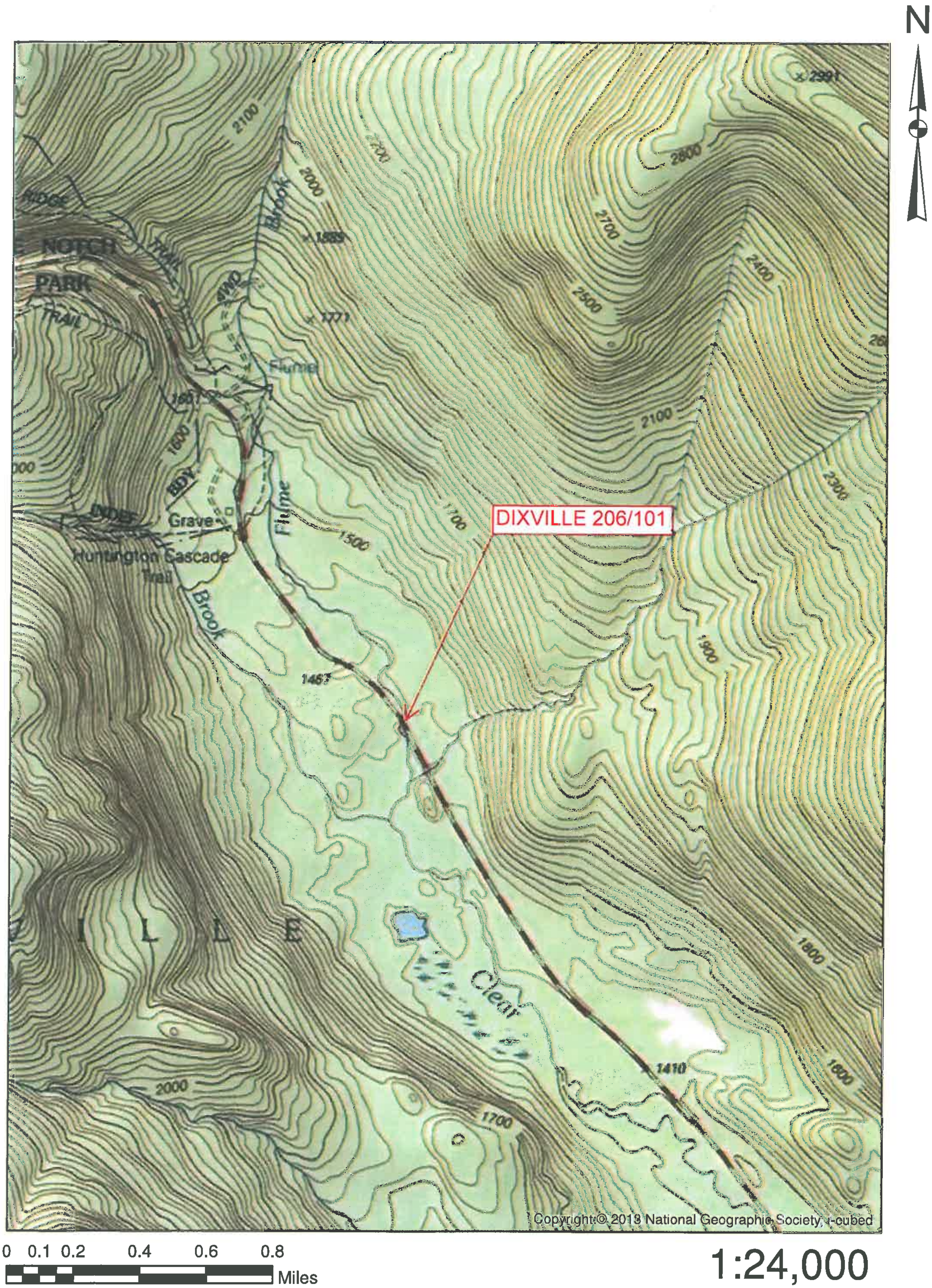
JURISDICTIONAL AREA	PERMANENT Sq. Ft. / Lin. Ft.	TEMPORARY Sq. Ft. / Lin. Ft.
Forested wetland	☐ ATF	☐ ATF
Scrub-shrub wetland	☐ ATF	☐ ATF
Emergent wetland	☐ ATF	☐ ATF
Wet meadow	☐ ATF	☐ ATF
Intermittent stream channel	/ ☐ ATF	/ ☐ ATF
Perennial Stream / River channel	89 / 65 ☐ ATF	1739 / 118 ☐ ATF
Lake / Pond	/ ☐ ATF	/ ☐ ATF
Bank - Intermittent stream	/ ☐ ATF	/ ☐ ATF
Bank - Perennial stream / River	152 / 365 ☐ ATF	1431 / 125 ☐ ATF
Bank - Lake / Pond	/ ☐ ATF	/ ☐ ATF
Tidal water	/ ☐ ATF	/ ☐ ATF
Salt marsh	☐ ATF	☐ ATF
Sand dune	☐ ATF	☐ ATF
Prime wetland	☐ ATF	☐ ATF
Prime wetland buffer	☐ ATF	☐ ATF
Undeveloped Tidal Buffer Zone (TBZ)	☐ ATF	☐ ATF
Previously-developed upland in TBZ	☐ ATF	☐ ATF
Docking - Lake / Pond	☐ ATF	☐ ATF
Docking - River	☐ ATF	☐ ATF
Docking - Tidal Water	☐ ATF	☐ ATF
Vernal Pool	☐ ATF	☐ ATF
TOTAL	241 / 430	3170 / 243

15. APPLICATION FEE: See the Instructions & Required Attachments document for further instruction

☐ Minimum Impact Fee: Flat fee of $ 200

☐ Minor or Major Impact Fee: Calculate using the below table below

Permanent and Temporary (non-docking)	**3411** sq. ft.	X $0.20 =	**$ 682.20**
Temporary (seasonal) docking structure:	sq. ft.	X $1.00 =	$
Permanent docking structure:	sq. ft.	X $2.00 =	$
Projects proposing shoreline structures (including docks) add $200 =			$
Total =			**$ 682.20**
The Application Fee is the above calculated Total or $200, whichever is greater =			**$ 682.20**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DIXVILLE 206/101
NOTCH
PARK
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RIDGE
Brook
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Grave
Huntington Cascade Trail
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NEW HAMPSHIRE DEPARTMENT OF Environmental Services

WETLANDS PERMIT APPLICATION – ATTACHMENT A
MINOR AND MAJOR - 20 QUESTIONS

Land Resources Management
Wetlands Bureau

Check the Status of your application: www.des.nh.gov/onestop

RSA/ Rule: RSA 482-A, Env-Wt 100-900

Env-Wt 302.04 Requirements for Application Evaluation - For any major or minor project, the applicant shall demonstrate by plan and example that the following factors have been considered in the project's design in assessing the impact of the proposed project to areas and environments under the department's jurisdiction. Respond with statements demonstrating:

1. The need for the proposed impact.

The existing bridge carrying NH 26 over Flume Brook is in need of rehabilitation. The current condition of the bridge shows spalling at the abutments and along the centerline of the joint as well as erosion along the southern bank. It is necessary to impact jurisdictional areas in order to provide the necessary repairs for the structure. The impacts are to allow for temporary impacts to repair the concrete, and the permanent impacts are to provide erosion control with riprap placement.

2. That the alternative proposed by the applicant is the one with the least impact to wetlands or surface waters on site.

The alternatives considered are as follows:

Replace the structure with a new structure in compliance with the NH Stream Crossing Guidelines: According to the NH Stream Crossing Guidelines, if a new structure were to be constructed at this location it would require a span of 27'-0. A structure of this size would cost approximately $650,000. Spending this much money on a structure that could be adequately preserved for approximately $120,000 would not be a practicable use of resources.

Repair concrete spalls and place riprap: This is the preferred alternative because it is the most effective way to repair and provide the necessary erosion protection this bridge needs. The project as proposed has an estimated cost of $120,000. This is the most cost effective solution and meets the stream crossing rules to the maximum extent practicable.

In the December 2018 Natural Resource Agency Coordination Meeting no concerns with opting to do this alternative were raised. It was agreed that mitigation would not be required for this project.

3. The type and classification of the wetlands involved.

R3UB12-Riverine upper perennial unconsolidated bottom cobble gravel and sand

Bank

4. The relationship of the proposed wetlands to be impacted relative to nearby wetlands and surface waters.

Flume Brook flows into Clear Stream shortly after the NH 26 crossing.

5. The rarity of the wetland, surface water, sand dunes, or tidal buffer zone area.

Flume Brook has not been identified as a rare surface water.

6. The surface area of the wetlands that will be impacted.

1811 sq. ft. Riverine (70 sq. ft. permanent, 1741 sq. ft. temporary)

1583 sq. ft. Bank (152 sq. ft. permanent, 1431 sq. ft. temporary)

7. The impact on plants, fish and wildlife including, but not limited to:
   a. Rare, special concern species;
   b. State and federally listed threatened and endangered species;
   c. Species at the extremities of their ranges;
   d. Migratory fish and wildlife;
   e. Exemplary natural communities identified by the DRED-NHB; and
   f. Vernal pools.

a) The Natural Heritage Bureau (NHB) did have records present in the area, however the proposed project is not expected to impact the recorded species.

b) The U.S. Fish & Wildlife Services (USFWS) IPaC tool (05E1NE00-2019-SLI-1162) identified the Northern Long Eared Bat and the Canada Lynx, federally listed threatened species, as species that may be present within the bounds of the project area. The proposed work will not remove any trees greater than 3" diameter at breast height. A streamlined 4(d) Rule consultation form has been submitted to the USFWS New England Field Office to notify the USFWS of the project and describe the activities that are accepted from incidental take prohibitions. The streamlined 4(d) Rule consultation form indicated that the project adheres to the conditions of the NLEB 4(d) Rule and the project's Section 7 consultation requirements are satisfied by submission of the form in accordance with the January 5, 2016, Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB. The project would not result in any prohibited take of NLEB. The surrounding forested landscape is suitable habitat for Canada Lynx, however the scope of proposed work is not likely to adversly affect the federally threatened Canada Lynx. (see additional information section.)

c) There are no species known to be at the extremities of their ranges located in the project area.

d) Migratory fish and wildlife will not be affected by this project.

e) The Department has coordinated with DRED and the results of the NHB review revealed there was a record but it will not be expected to be impacted.

f) There were no vernal pools identified and/or delineated in the project area.

8. The impact of the proposed project on public commerce, navigation and recreation.

During construction all lanes of traffic will be maintained at all times. Flume Brook is a non-navigable water which makes it non-conducive to boaters. There are no recreational areas that have been identified in this area except for the possibility for fishing. During construction fishing activities from the banks of the brook will need to occur outside of the construction work zone. When construction is completed, the project as proposed will be a benefit to the public commerce.

9. The extent to which a project interferes with the aesthetic interests of the general public. For example, where an applicant proposes the construction of a retaining wall on the bank of a lake, the applicant shall be required to indicate the type of material to be used and the effect of the construction of the wall on the view of other users of the lake.

The project will not significantly interfere with the aesthetic interests of the general public. The proposed improvements will be more pleasing to the eye than the structure in poor condition.

10. The extent to which a project interferes with or obstructs public rights of passage or access. For example, where the applicant proposes to construct a dock in a narrow channel, the applicant shall be required to document the extent to which the dock would block or interfere with the passage through this area.

The project will not interfere with or obstruct public rights of passage or access. During construction, traffic will be maintained at all times.

11. The impact upon abutting owners pursuant to RSA 482-A:11, II. For example, if an applicant is proposing to rip-rap a stream, the applicant shall be required to document the effect of such work on upstream and downstream abutting properties.

The project is not expected to have a positive impact on any abutting properties. The rehabilitated structure will better serve the abutting properties if they need to travel on the road.

The project as proposed will not alter the chance of flooding on abutting properties upstream or downstream.

12. The benefit of a project to the health, safety, and well being of the general public.

The project will provide a safer, longer lasting structure and roadway. If the structure is not rehabilitated, the bridge will eventually be load posted or closed. Keeping the roadway open beneftis commerce, trade, emergeny access, etc. for the general public.

13. The impact of a proposed project on quantity or quality of surface and ground water. For example, where an applicant proposes to fill wetlands the applicant shall be required to document the impact of the proposed fill on the amount of drainage entering the site versus the amount of drainage exiting the site and the difference in the quality of water entering and exiting the site.

The surface water currently runs off the road and over natural vegetation. Upon completion of the project, surface water will drain in the same manner. This will have no adverse effects on the quality or quantity of surface and ground water within the project limits. Best Managmenet Practices will be used to prevent any adverse effect to water quality during construction.

14. The potential of a proposed project to cause or increase flooding, erosion, or sedimentation.

Flooding: The proposed work for this project will not have any effect on the structure's ability to pass the 100 year storm event.

Erosion: A toewall will be installed and riprap will be placed along the south bank to prevent erosion & undermining at the structure.

Sedimentation: Nothing will be placed that would be a barrier to sediment transport.

15. The extent to which a project that is located in surface waters reflects or redirects current or wave energy which might cause damage or hazards.

Surface waters will not be reflected or redirected as a result of this project. Flume Brook does not have enough surface water for wave energy to be an issue.

16. The cumulative impact that would result if all parties owning or abutting a portion of the affected wetland or wetland complex were also permitted alterations to the wetland proportional to the extent of their property rights. For example, an applicant who owns only a portion of a wetland shall document the applicant's percentage of ownership of that wetland and the percentage of that ownership that would be impacted.

The work consists of the repair of an existing bridge structure. There are no similar structures in the vicinity owned by other parties that would require repair.

17. The impact of the proposed project on the values and functions of the total wetland or wetland complex.

The project has mimimized overall impacts and will not impact the values and functions of Flume Brook.

18. The impact upon the value of the sites included in the latest published edition of the National Register of Natural Landmarks, or sites eligible for such publication.

The project is not located in or near any Natural Landmarks listed on the National Register.

19. The impact upon the value of areas named in acts of congress or presidential proclamations as national rivers, national wilderness areas, national lakeshores, and such areas as may be established under federal, state, or municipal laws for similar and related purposes such as estuarine and marine sanctuaries.

The proposed project is not within any areas named in acts of Congress or presidential proclamations.

20. The degree to which a project redirects water from one watershed to another.

The project as proposed will not redirect water from one watershed to another.

Additional comments

Sarah Large, NHDOT Bureau of Environment Wetlands Program Analyst, has made the determination that the proposed work may affect, but is not likely to adversely affect, the federally threatened Canada lynx. NHDOT coordinated with the Natural Heritage Bureau and was informed that there are no documented occurrences of Canada lynx in the project area. The forested area surrounding the crossing is suitable habitat for the Canada lynx, moist, cool, boreal spruce-fir forests, however since the project activities will primarily occur on already developed land within the right of way that is not suitable habitat for the lynx, there are no direct permanent impacts to the lynx habitat since no tree clearing is needed to access the crossing, and construction activities are short term and not anticipated to cause disturbance to Canada lynx from noise, lights, or vibration the effects are insignificant, the project is not likely to adversley affect the Canada lynx.

NOTES ON CONFERENCE:

Finalize November 21, 2018 meeting minutes.
Matt Urban indicated that comments and edits regarding the November 21st Natural Resource Agency meeting minutes had come in from several people* and that he would like to finalize the minutes with those edits incorporated into them. The group agreed. The minutes were finalized and posted subsequent to the meeting.
**Gino Infascelli, Amy Lamb, Carol Henderson, Jon Hebert, John Magee, Chris Carucci, Pete Walker, Wendy Johnson, and Lori Sommer all commented on the minutes.*

Monroe, #42411
Doug Locker provided an overview of the project. The project is the rehabilitation of an existing bridge, Monroe 125/113, carrying NH 135 over Roaring Brook. The existing bridge is an existing concrete slab with a 17' span and was constructed in 1933 and rebuilt in 1980. The drainage basin at this location was stated to be 4.66 square miles, and the NHB report was cited as having no record. It was also noted the site had knotweed present, but we would not be impacting that area. It was presented that the proposed work would include stabilizing the northeast bank by adding riprap and constructing a new wingwall. Photos were shown of the site and structure including images that showed how the existing structure had experienced scour and erosion.

Mike Hicks asked if there would be any tree clearing for this project, and Doug Locker said there was no need. Mike also asked if a cultural review would be done. Matt Urban said the cultural review would be completed by Bureau of Environment.

It was agreed that there was a need for mitigation for this project with regards to the length of the new wing along both the channel and the bank on the northeast quadrant.

This project has not been previously discussed at a Monthly Natural Resource Agency Coordination Meeting.

Dixville, #42398
Doug Locker provided an overview of the project. The project is the rehabilitation of the bridge, Dixville 206/101 carrying NH 26 over Flume Brook. This bridge is a concrete arch that spans 15' and has a drainage basin of 10.32 sq. miles. The NHB was cited as having a record but not expected to be impacted. The proposed work was stated to be repair to the wingwalls and centerline joint requiring temporary impacts, riprap needed to stabilize the southern bank, and a toe wall to prevent further undermining of the southern abutment.

Mike Hicks advised that the bridge should be cleared through historic review. The cultural resources program in the Bureau of Environment will review the project. M. Hicks asked if any trees will be cleared. D. Locker advised that no trees would be cleared.

Bridge 206/101 is the northern of the two crossings under NH Route 26 on the topographic map presented.

The bridge database had listed the bridge as crossing Clear Stream which is essential fish habitat, however through further review it was determined that the bridge crosses Flume Brook. This correction was mentioned by Gino Infascelli in the meeting and later confirmed by Sarah Large. M. Hicks indicated that if the stream is actually Flume Brook an EFH assessment would not be needed since Flume Brook is not listed as EFH.

Lori Sommer mentioned mitigation would not be required as a result of riprap already present and being within 10' of the structure. G. Infascelli added that the work is also needed to protect the existing infrastructure.

This project was previously discussed at the 11/21/2018 Monthly Natural Resource Agency Coordination Meeting.

Bow, #42300

- Christopher Carucci and Matt Urban presented the project.
- The project is Turnpikes Funded (non-fed.)
- Ad-Date May 2019
- Project is located south of the I-89 interchange on I-93 North and Southbound in the Town of Bow.
- The structure is located on a Tier 2 Stream, perennial, with no history of flooding.
- Streamstats drainage area is 0.58 square miles (375 acres).The structure consists of a 48"RCP at the inlet which transitions to a junction box under the interstate, and then transitions again to a 48"CMP. There are stone headwalls on the 48" rcp inlet and 48" cmp outlet.
- The segment of 48" rcp was constructed in 1957 and is approximately 180' long at 9% slope.
- The segment of 48" cmp was constructed in 1977 and is approximately 144' long at 15% slope.
- A portion of I-93 closed drainage was connected to the junction box with a 15" metal pipe which has failed.
- Turnpikes forces plugged the 15" cmp and installed a short segment of 18" slope drain to provide an outlet for the closed drainage.
- The 48" CMP at the outlet is the section of pipe that is rusted and in need of rehabilitation.
- The Inlet header is also in need of rehabilitation.
- The outlet is perched approximately 12"
- Matt Urban summarized the following environmental information:
    - The stream has been delineated as perennial.
    - Regional curve estimates the bank full width at 9.6'
    - Stream is considered a Tier 2 Stream
    - Anticipate Env-Wt904.06 (consistent with proposed sliplining).
    - Anticipate Temp impacts only to facilitate lining and headwall repairs.
    - Anticipate No need for Mitigation.
    - Cultural Review was completed with no above or below ground concerns. Also that this work falls under the Section 106 Exemption regarding effects to the interstate Highway System.
    - NHB search (NHB18-3420) indicated no concerns for the project
    - IPAC- identified NLEB and Small Whorled Pogonia (SWP). Matt Indicated that during field reviews the SWP was not found, habitat thought not to be suitable. As for NLEB Matt indicated there would be some clearing but that the Department has submitted the 4(d) consultation to the USFWS.
    - Additional coordination with NHF&G was completed to discuss the steep slope of the pipes and the existing perch. John Magee ran the Coffman thesis analysis and was able to determine that it was unlikely that any fish passage would be occurring at this location with the exception of a very diligent adult brook trout as a possibility.
    - Not within shoreland jurisdiction, however project is located within ¼ mile of the Merrimack River and therefore the Merrimack Local River Advisory Committee will be notified upon submission of the wetlands application.

Dixville, #42398 Mitigation Summary

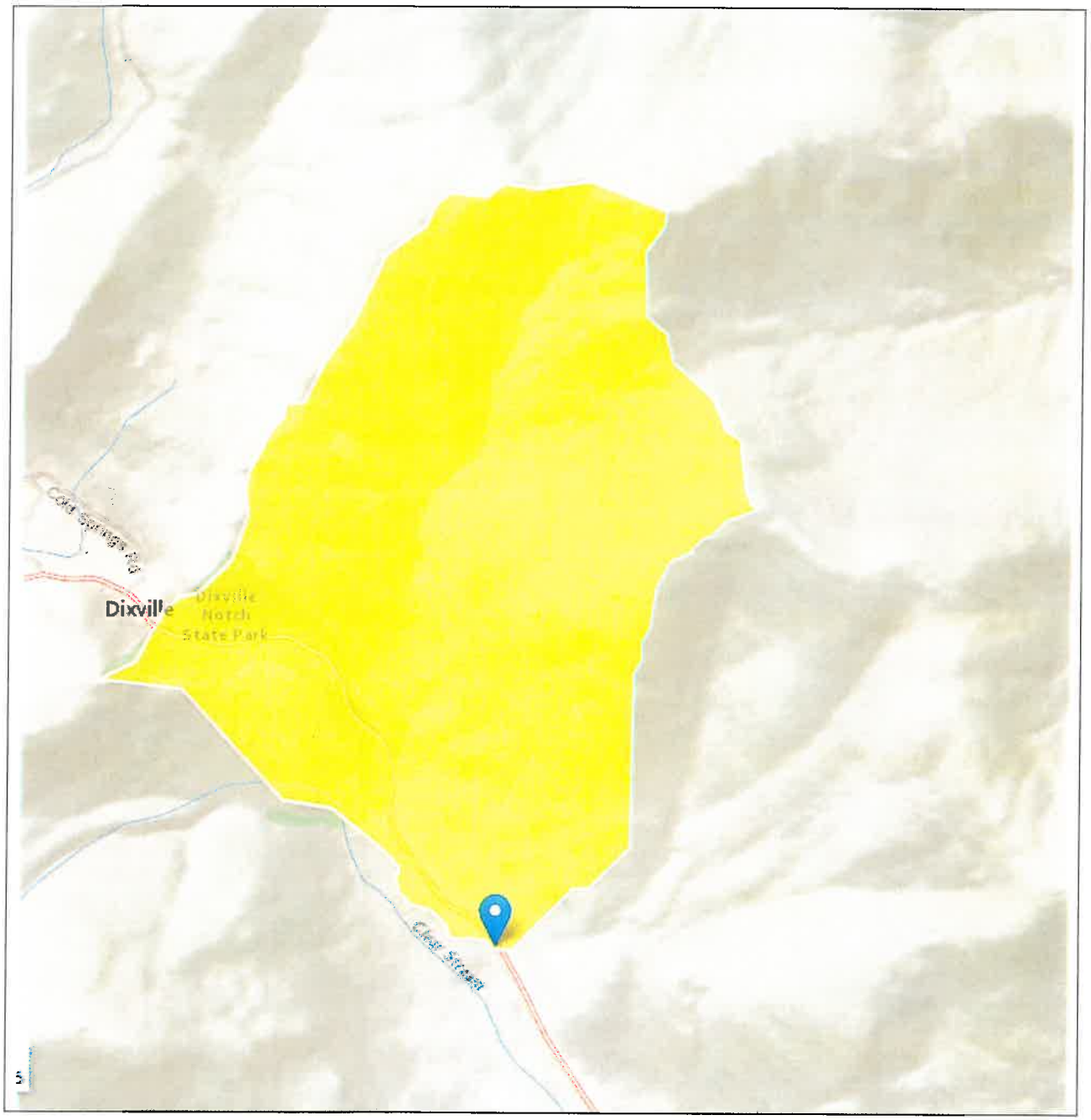
The Department is proposing to rehabilitate bridge 206/101, which carries NH 26 over Flume Brook in Dixville. The scope of work includes repairing the wingwalls and centerline joint, place riprap along the NE and SE wingwalls, and install a toewall along the south abutment to prevent further undermining of the structure. At the December 19, 2018 Natural Resource Agency Meeting the group discussed mitigation needs related to the abutment repairs and riprap. Per the discussions the Department does not propose to mitigate for the permanent impacts along the abutment of the bridge or the riprap at the NE and SE wing as both are maintenance activities needed to protect the existing infrastructure. Riprap currently exists along the NE and SE wingwall as well.

Hydraulic Data

Drainage Area – 2.76 square miles

Flow – Q 100 = 539 cfs

The proposed structure will pass the 100 year flood.



Watershed Boundaries Map

NH Department of Transportation
Bureau of Bridge Maintenance
Project, # 42398
Env-Wt 904.09 Alternative Design
TECHNICAL REPORT

Env-Wt 904.09(a) - If the applicant believes that installing the structure specified in the applicable rule is not practicable, the applicant may propose an alternative design in accordance with this section.

Please explain why the structure specified in the applicable rule is not practicable (Env-Wt 101.69 defines practicable as *available and capable of being done after taking into consideration costs, existing technology, and logistics in light of overall project purposes.)*

Flume Brook has a drainage area of 2.76 square miles which qualifies this stream as a Tier 3 crossing. The required span for a compliant crossing in accordance with the NH Stream Crossing Guidelines and based on the regional hydraulic curve calculation would be 27'-0. A structure of this size would cost approximately $650,000. Spending this much money on a structure that could be adequately preserved for approximately $120,000 would not be a practicable use of resources.

The proposed alternative meets the specific design criteria for Tier 2 and Tier 3 crossings to the *maximum extent practicable*, as specified below.

Env-Wt 904.05 Design Criteria for Tier 2 and Tier 3 Stream Crossings – New Tier 2 stream crossings, replacement Tier 2 crossings that do not meet the requirements of Env-Wt 904.07, and new and replacement Tier 3 crossings shall be designed and constructed:

(a) In accordance with the NH Stream Crossing Guidelines.

The proposed improvements have been developed in accordance with the NH Stream Crossing Guidelines. The Department has collected data in the field and in the office which aid in the design of the proposed crossing. Using information that was available the Department has determined that a full bridge replacement would not be practicable. As such, the Department proposes an alternative design that meets the intent of the stream crossing guidelines to the maximum extent practicable.

(b) With bed forms and streambed characteristics necessary to cause water depths and velocities within the crossing structure at a variety of flows to be comparable to those found in the natural channel upstream and downstream of the stream crossing.

The proposed project will not significantly change the existing waterway opening and structure alignment, and therefore, it will not change the depths or velocities at the crossing. The proposed alternative, although not an upgrade, does not diminish the existing conditions at the crossing.

(c) To provide a vegetated bank on both sides of the watercourse to allow for wildlife passage.

The existing structure does not have banks through the bridge, nor will it after the repair. The banks abutting both sides of Flume Brook are currently vegetated. It is not possible to vegetate with shrubs/woody vegetation on the banks immediately in front of critical sections of infrastructure, such as

wing walls because over time as large vegetation grows in and around riprap their roots and the possibility of tree falls can threaten the integrity of the riprap.

(d) To preserve the natural alignment and gradient of the stream channel, so as to accommodate natural flow regimes and the functioning of the natural floodplain.

The natural alignment and gradient of the stream channel will not be changed as a result of this project.

(e) To accommodate the 100-year frequency flood, to ensure that (1) there is no increase in flood stages on abutting properties; and (2) flow and sediment transport characteristics will not be affected in a manner which could adversely affect channel stability.

The project as proposed will not alter the chance of flooding on abutting properties. The existing and proposed repairs to the structure will continue to pass the 100 year flood flow. Sediment transport characteristics will not change as a result of the repairs.

(f) To simulate a natural stream channel.

The majority of the stream channel under the structure is currently a natural bottom. The riprap added is only to improve upon the armoring of the substructure as well as the NE and SE wingwalls. Riprap will not be placed throughout the interior of the structure.

(g) So as not to alter sediment transport competence.

Sediment transport competence will not be changed as a result of this project.

Env-Wt 904.09(c)(3) – The alternative design must meet the general design criteria specified in Env-Wt 904.01:

Env-Wt 904.01
(a) Not be a barrier to sediment transport;

Nothing that will be a barrier to sediment transport will be installed in this project.

(b) Prevent the restriction of high flows and maintain existing low flows;

High flows will not be restricted and low flows will be maintained as a result of this project. The project as proposed will not have any effect on the structures ability to pass the 100 year storm event.

(c) Not obstruct or otherwise substantially disrupt the movement of aquatic life indigenous to the waterbody beyond the actual duration of construction;

The movement of aquatic life indigenous to the water body will not change as a result of this project.

(d) Not cause an increase in the frequency of flooding or overtopping of banks;

The project as proposed will have no effect on the hydraulic capacity of the structure. High flows will not be restricted. The frequency of flooding or water overtopping the roadway or banks at the structure will not change due to the proposed project.

(e) Preserve watercourse connectivity where it currently exists;

Connectivity will not be changed as a result of this project.

(f) Restore watercourse connectivity where: (1) Connectivity previously was disrupted as a result of human activity(ies); and (2) Restoration of connectivity will benefit aquatic life upstream or downstream of the crossing, or both;

The watercourse is currently connected and the proposed work will not change this as a result of the project. Aquatic life passage upstream or downstream of the crossing will not be affected as a result of this project.

(g) Not cause erosion, aggradation, or scouring upstream or downstream of the crossing; and

The project will not cause erosion, aggradation, or scouring upstream or downstream of the crossing. The placed riprap is intended to prevent scour along the banks of the water body and at the wingwall to prevent excessive sediment transport and erosion in the future.

(h) Not cause water quality degradation.

The project as proposed will not impact the quantity or quality of surface and or groundwater at this site. Storm water and surface water will continue to sheet flow to the water body off the road and banks the way it does currently. Best Management Practices will be used to prevent any adverse effect to the water quality during construction

*****Note: An alternative design for Tier 1 stream crossings must meet the general design criteria (Env-Wt 904.01) only to the *maximum extent practicable.***

NEW HAMPSHIRE NATURAL HERITAGE BUREAU
NHB DATACHECK RESULTS LETTER

To: Douglas Locker, New Hampshire Department of Transportation
7 Hazen Drive
Concord, NH 03302

From: NH Natural Heritage Bureau

Date: 3/26/2019 (valid for one year from this date)

Re: Review by NH Natural Heritage Bureau of request submitted 3/22/2019

NHB File ID: NHB19-0928 **Applicant:** Steve Johnson

Location: Dixville
NH 26 over Flume Brook

Project Description: This project is the rehabilitation of the Bridge Carrying NH 26 over Flume Brook

The NH Natural Heritage database has been checked by staff of the NH Natural Heritage Bureau and/or the NH Nongame and Endangered Species Program for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government.

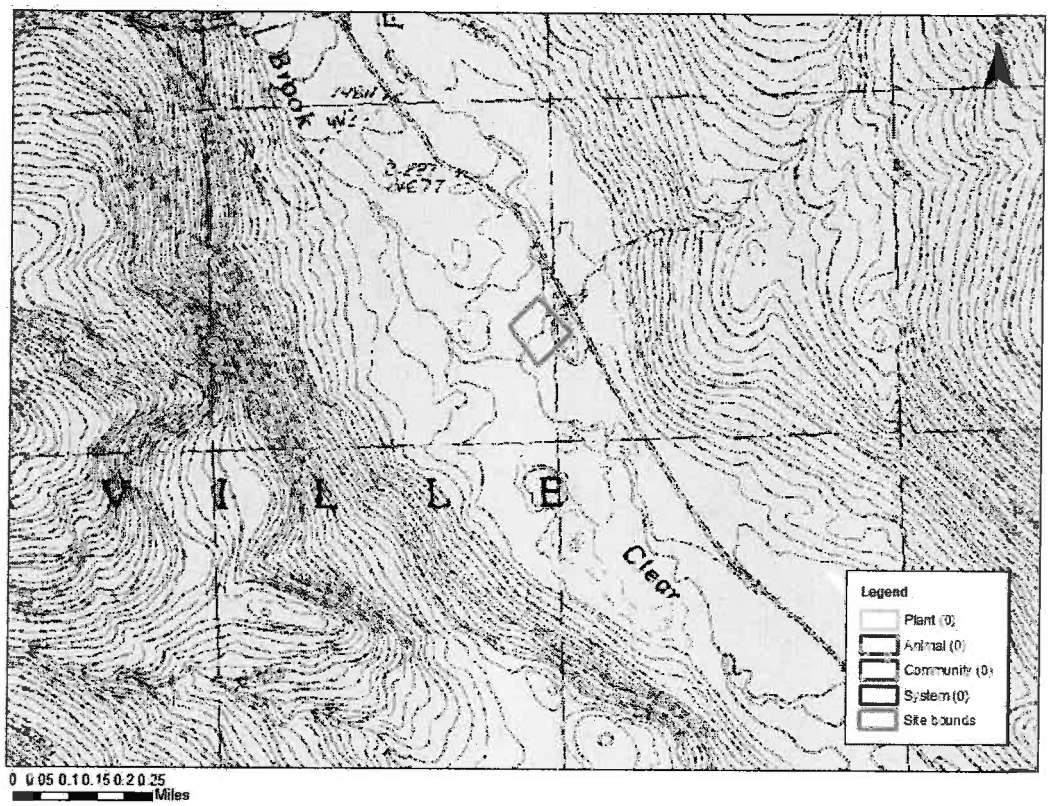
It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 3/22/2019, and cannot be used for any other project.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

MAP OF PROJECT BOUNDARIES FOR: **NHB19-0928**

NHB19-0928



Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
http://www.fws.gov/newengland

In Reply Refer To:
Consultation Code: 05E1NE00-2019-SLI-1162
Event Code: 05E1NE00-2019-E-02682
Project Name: Dixville 206/101

March 19, 2019

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2019-SLI-1162

Event Code: 05E1NE00-2019-E-02682

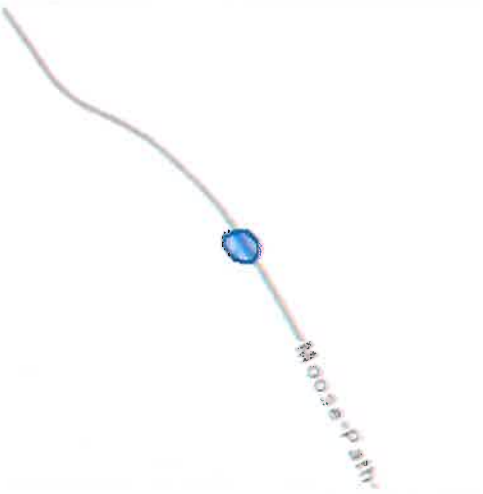
Project Name: Dixville 206/101

Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Description: Make repairs to the bridge carrying NH 26 over Flume Brook

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/44.84992480753989N71.2778815981226W



Counties: Coos, NH

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Canada Lynx *Lynx canadensis* Population: Wherever Found in Contiguous U.S. There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3652	Threatened
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

IPaC Official Species List Consultation Code:

Information to Determine 4(d) Rule Compliance:	**YES**	**NO**
1. Does the project occur wholly outside of the WNS Zone[1]?	☐	☒
2. Have you contacted the appropriate agency[2] to determine if your project is near known hibernacula or maternity roost trees?	☒	☐
3. Could the project disturb hibernating NLEBs in a known hibernaculum?	☐	☒
4. Could the project alter the entrance or interior environment of a known hibernaculum?	☐	☒
5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year?	☐	☒
6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31.	☐	☒

You are eligible to use this form if you have answered yes to question #1 **or** yes to question #2 **and** no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

Agency and Applicant[3] (Name, Email, Phone No.): Sarah Large, NHDOT, Sarah.Large@dot.nh.gov, 603-271-3226

Project Name: Dixville, 42398

Project Location (include coordinates if known): 44` 50' 59.7", 71`16'40.5"

Basic Project Description (provide narrative below or attach additional information): he proposed project is the rehabilitation of the bridge Dixiville 206/101, which carries NH 26 over Flume Brook. This bridge is a concrete arch that spans 15'. The proposed work is to repair the wingwalls and centerline joint, install riprap along the southern bank, and a toe wall to prevent further undermining of the southern abutment. The proposed work will not remove any trees greater than 3" diameter at breast height.

[1] http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf
[2] See http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html
[3] If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

General Project Information	YES	NO
Does the project occur within 0.25 miles of a known hibernaculum?	☐	☒
Does the project occur within 150 feet of a known maternity roost tree?	☐	☒
Does the project include forest conversion[4]? (if yes, report acreage below)	☐	☒
Estimated total acres of forest conversion		
If known, estimated acres[5] of forest conversion from April 1 to October 31		
If known, estimated acres of forest conversion from June 1 to July 31[6]		
Does the project include timber harvest? (if yes, report acreage below)	☐	☒
Estimated total acres of timber harvest		
If known, estimated acres of timber harvest from April 1 to October 31		
If known, estimated acres of timber harvest from June 1 to July 31		
Does the project include prescribed fire? (if yes, report acreage below)	☐	☐
Estimated total acres of prescribed fire		
If known, estimated acres of prescribed fire from April 1 to October 31		
If known, estimated acres of prescribed fire from June 1 to July 31		
Does the project install new wind turbines? (if yes, report capacity in MW below)	☐	☒
Estimated wind capacity (MW)		

Agency Determination:

By signing this form, the action agency determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature: Sarah Lange Date Submitted: 4/4/2019

[4] Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the BO).
[5] If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.
[6] If the activity includes tree clearing in June and July, also include those acreage in April to October.

New Hampshire DOT
Department of Transportation

Victoria F. Sheehan
Commissioner

THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION

William Cass, P.E.
Assistant Commissioner

LETTER OF TRANSMITTAL

Date: 4/4/2019

TO: Susi von Oettingen
Endangered Species Biologist
US Fish and Wildlife Service
70 Commercial Street, Suite 300
Concord, NH 03301

Bureau: Environment
Project: Dixville
Project No.: #42398
Consultation Code: 05E1NE00-2019-SLI-1162

Susi:

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via the following items:

COPIES	DATE	DESCRIPTION
1	4/4/2019	NLEB 4(d) Rule Streamlined Consultation Form
1	4/4/2019	USGS Project Location Map
1	4/4/2019	USFWS Official Species List

THESE ARE TRANSMITTED as checked below:

☒ For approval
☐ For your use
☐ As requested
☐ For review and comment
☐ Approved as submitted
☐ Approved as noted
☐ Returned for corrections
☐ Returned for your use

REMARKS: Enclosed is the NLEB 4(d) Rule Streamlined Consultation Form and backup information for the above referenced project in the town of Dixville, NH. The proposed is to rehabilitate a concrete arch bridge by repairing the wingwalls and centerline joint, install riprap along the NE & SE banks, and a toe wall to prevent further undermining of the southern abutment. The proposed work will not remove any trees greater than 3" diameter at breast height. The NHDOT has determined that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule. The lead Federal Agency is the US Army Corp of Engineers
Your concurrence with this determination is requested. Please contact me if you have any questions.

Sarah Large

Sarah Large
Wetlands Program Analyst
Bureau of Environment, NHDOT
Room 160 - Tel. (603) 271-6916
E-mail: Sarah.Large@dot.nh.gov

Enc.
Mike Hicks, US ACOE

Large, Sarah

From: Hicks, Michael C CIV USARMY CENAE (USA) <Michael.C.Hicks@usace.army.mil>
Sent: Tuesday, April 23, 2019 8:37 AM
To: Large, Sarah
Subject: RE: NHDOT Dixville 42398 IPaC hit for Canada Lynx

Sarah,

Yes, I believe the Lynx likes higher altitudes and does not frequent road areas, where there is noise, traffic and humans activity.

Thanks,
Mike

Michael Hicks, PM
USACE, REG DIV., BR. C
978-318-8157

-----Original Message-----
From: Large, Sarah [mailto:Sarah.Large@dot.nh.gov]
Sent: Monday, April 22, 2019 1:39 PM
To: Hicks, Michael C CIV USARMY CENAE (USA) <Michael.C.Hicks@usace.army.mil>
Subject: [Non-DoD Source] RE: NHDOT Dixville 42398 IPaC hit for Canada Lynx

Good afternoon Mike,

Here are my thoughts and determination regarding the Canada Lynx.

I have made the determination that the proposed work may affect, but is not likely to adversely affect, the federally threatened Canada lynx. NHDOT coordinated with the Natural Heritage Bureau and was informed that there are no documented occurrences of Canada lynx in the project area. The forested area surrounding the crossing is suitable habitat for the Canada lynx, moist, cool, boreal spruce-fir forests, however since the project actives will primarily occur on already developed land within the right of way that is not suitable habitat for the lynx, there are no direct permanent impacts to the lynx habitat since no tree clearing is needed to access the crossing, and construction activities are short term and not anticipated to cause disturbance to Canada lynx from noise, lights, or vibration the effects are insignificant the project is not likely to adversely affect the Canada lynx.

Do you concur?

I am reaching out because the Canada Lynx came up in our IPaC list for the project area, and NHB did not report any known occurrences. Our project area does include habitat the seems suitable <Blockedhttps://www.fws.gov/mountain-prairie/es/canadaLynx.php> for the Canada Lynx, however I believe a no effect determination is appropriate as the work will be confined close to the road and bridge.

Do you concur?

From reviewing the Section 7 handbook it seems that the lead federal agency is the agency to make the determination.

Best wishes,

Sarah Large

Wetlands Program Analyst

NH Department of Transportation

Bureau of Environment

Project__Dixville 42398_____

Wetland Application – NHDOT Cultural Resources Review

For the purpose of compliance with regulations of the National Historic Preservation Act, the Advisory Council on Historic Preservation's *Procedures for the Protection of Historic Properties* (36 CFR 800), the US Army Corps of Engineers' *Appendix C*, and/or state regulation RSA 227-C:9, *Directive for Cooperation in the Protection of Historic Resources*, the NHDOT Cultural Resources Program has reviewed the proposed project for potential impacts to historic properties.

Proposed Project: NH 26 over Flume Brook (206/101), Impact wetlands (river channel) temporarily to repair wingwalls and centerline joint and place riprap along southern banks and add toe wall along south abutment. Associated with Drainage Basin 2.76 sq. miles (Tier 3)

Above Ground Review

Known/approximate age of structure:
Br. 206/101, Concrete Arch spans 15'
Constructed 1929, widened 8' in 1970, including removing concrete parapets which extremely diminished its integrity

☒ **No Potential to Cause Effect/No Concerns**

Due to the limited impacts proposed, the actions comply with **Appendix B, Activities with Minimal Potential to Cause Effects:**

8. Bridge deck preservation and replacement, as long as no character defining features are impacted

9. Non-historic bridge and culvert maintenance, renovation, or total replacement, **that may require minor additional right-of-way or easement**, including:
a. replacement or maintenance of non-historic bridges

11. Stream and/or slope stabilization and restoration activities (including removal of debris or sediment obstructing the natural waterway, or any non-invasive action to restore natural conditions).

☐ Concerns:

Below Ground Review

Recorded Archaeological site: ☐Yes ☒No

Nearest Recorded Archaeological Site Name & Number: 27-CO-0052 D.A. Jordan Homestead
☐Pre-Contact ☒Post-Contact

Distance from Project Area:
3.43 miles (5.5 km) northwest of project area

☒ **No Potential to Cause Effect/No Concerns**
As proposed activities will be confined to areas previously disturbed by bridge construction and maintenance and no new areas of excavation are proposed, there are no archaeological concerns.

☐ Concerns:

Reviewed by:

Sheila Charles Jill Edelen

1/2/2019

NHDOT Cultural Resources Program Specialist/Archaeologist

Date:

US Army Corps of Engineers
New England District

U.S. Army Corps of Engineers
New Hampshire Programmatic General Permit (PGP)
Appendix B - Corps Secondary Impacts Checklist
(for inland wetland/waterway fill projects in New Hampshire)

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to "work" include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See PGP, GC 5 regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm to determine if there is an impaired water in the vicinity of your work area.*		X
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?	X	
2.2 Are there proposed impacts to SAS, shellfish beds, special wetlands and vernal pools (see PGP, GC 26 and Appendix A)? Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) website, www.nhnaturalheritage.org, specifically the book Natural Community Systems of New Hampshire.		X
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)	X	
2.5 The overall project site is more than 40 acres.		X
2.6 What is the size of the existing impervious surface area?	3661 sq. ft.	
2.7 What is the size of the proposed impervious surface area?	3661 sq. ft.	
2.8 What is the % of the impervious area (new and existing) to the overall project site?	35%	
3. Wildlife	Yes	No
3.1 Has the NHB determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require a NHB determination.)	X	
3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: • PDF: www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html.		X
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the PGP, GC 21?	X	

4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		X
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		X
5. Historic/Archaeological Resources		
If a minor or major impact project, has a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) been sent to the NH Division of Historical Resources as required on Page 5 of the PGP?**	X	

*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.
** If project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.

US Army Corps of Engineers®
New England District

New Hampshire General Permits (GPs)
Appendix B - Corps Secondary Impacts Checklist
(for inland wetland/waterway fill projects in New Hampshire)

1. Attach any explanations to this checklist. Lack of information could delay a Corps permit determination.
2. All references to "work" include all work associated with the project construction and operation. Work includes filling, clearing, flooding, draining, excavation, dozing, stumping, etc.
3. See GC 5, regarding single and complete projects.
4. Contact the Corps at (978) 318-8832 with any questions.

1. Impaired Waters	Yes	No
1.1 Will any work occur within 1 mile upstream in the watershed of an impaired water? See http://des.nh.gov/organization/divisions/water/wmb/section401/impaired_waters.htm to determine if there is an impaired water in the vicinity of your work area.*	X	
2. Wetlands	Yes	No
2.1 Are there are streams, brooks, rivers, ponds, or lakes within 200 feet of any proposed work?		X
2.2 Are there proposed impacts to SAS, special wetlands. Applicants may obtain information from the NH Department of Resources and Economic Development Natural Heritage Bureau (NHB) DataCheck Tool for information about resources located on the property at https://www2.des.state.nh.us/nhb_datacheck/. The book Natural Community Systems of New Hampshire also contains specific information about the natural communities found in NH.	X	
2.3 If wetland crossings are proposed, are they adequately designed to maintain hydrology, sediment transport & wildlife passage?	X	
2.4 Would the project remove part or all of a riparian buffer? (Riparian buffers are lands adjacent to streams where vegetation is strongly influenced by the presence of water. They are often thin lines of vegetation containing native grasses, flowers, shrubs and/or trees that line the stream banks. They are also called vegetated buffer zones.)	X	
2.5 The overall project site is more than 40 acres?		X
2.6 What is the area of the previously filled wetlands?		
2.7 What is the area of the proposed fill in wetlands?		
2.8 What is the % of previously and proposed fill in wetlands to the overall project site?		
3. Wildlife	Yes	No
3.1 Has the NHB & USFWS determined that there are known occurrences of rare species, exemplary natural communities, Federal and State threatened and endangered species and habitat, in the vicinity of the proposed project? (All projects require an NHB ID number & a USFWS IPAC determination.) NHB DataCheck Tool: https://www2.des.state.nh.us/nhb_datacheck/ USFWS IPAC website: https://ecos.fws.gov/ipac/location/index		X

3.2 Would work occur in any area identified as either "Highest Ranked Habitat in N.H." or "Highest Ranked Habitat in Ecological Region"? (These areas are colored magenta and green, respectively, on NH Fish and Game's map, "2010 Highest Ranked Wildlife Habitat by Ecological Condition.") Map information can be found at: • PDF: www.wildlife.state.nh.us/Wildlife/Wildlife_Plan/highest_ranking_habitat.htm. • Data Mapper: www.granit.unh.edu. • GIS: www.granit.unh.edu/data/downloadfreedata/category/databycategory.html.		X
3.3 Would the project impact more than 20 acres of an undeveloped land block (upland, wetland/waterway) on the entire project site and/or on an adjoining property(s)?		X
3.4 Does the project propose more than a 10-lot residential subdivision, or a commercial or industrial development?		X
3.5 Are stream crossings designed in accordance with the GC 21?	X	
4. Flooding/Floodplain Values	Yes	No
4.1 Is the proposed project within the 100-year floodplain of an adjacent river or stream?		X
4.2 If 4.1 is yes, will compensatory flood storage be provided if the project results in a loss of flood storage?		N/A
5. Historic/Archaeological Resources		
For a minimum, minor or major impact project - a copy of the Request for Project Review (RPR) Form (www.nh.gov/nhdhr/review) with your DES file number shall be sent to the NH Division of Historical Resources as required on Page 11 GC 8(d) of the GP document**	X	

*Although this checklist utilizes state information, its submittal to the Corps is a Federal requirement.
** If your project is not within Federal jurisdiction, coordination with NH DHR is not required under Federal law.

Upstream Channel

Downstream Channel

Southeast Downstream Wingwall

Southwest Downstream Wingwall

Centerline Joint

CONSTRUCTION SEQUENCE

1. At normal to low flow, a cofferdam will be placed within the stream. The stream will be diverted to one side of the cofferdam.
2. The work zone will be dewatered or contained.
3. The concrete spalls and the centerline joint will be repaired.
4. Install concrete toewall
5. Riprap will be placed in front of the SW & SE wingwalls.
6. All dewatering devices will be removed and the site will be restored to its original quality.

Note: The Project will utilize BMP's from the Best Management Practices manual during all phases of construction.

Env-Wt 404 Criteria for Shoreline Protection

. The rehabilitation of the bridge that carries Rte. 26 over Flume Brook proposes the placement of stone fill within areas under the jurisdiction of the NH Wetlands Bureau and the US Army Corps of Engineers. The stone fill will be located in the channel and along the bank of the proposed structure as shown on the plans.

Pursuant to PART Wt 404 Criteria for Shoreline Stabilization, the following addresses each codified section of the Administrative Rules:

Wt 404.01 Least Intrusive Method

The riverbank stabilization treatment proposed is the least intrusive construction method necessary to minimize the disruption to the existing shorelines. The stone treatment can be reasonably constructed utilizing general highway construction methods.

Wt 404.02 Diversion of Water

Proposed roadway drainage will allow storm water run-off to be diverted so that it will flow over vegetated areas, insofar as possible, prior to entering Sucker Brook. This will minimize erosion of the shoreline.

Wt 404.03 Vegetative Stabilization

Natural vegetation will be left undisturbed to the maximum extent possible. The only locations being disturbed are the impacted areas on the plan for construction. All newly developed slopes and disturbed areas will have humus and seed applied for turf establishment, which will help stabilize the project area.

Wt 404.04 Rip-Rap

(a) Stone fill, as proposed, is shown on the attached plans to protect the channel and bank as necessary. Stable embankments are necessary to maintain the structural integrity of the bridge during all flow conditions.

(b) (1-5) The minimum and maximum stone size, the gradation, cross sections of the stone fill, proposed location, and other details have been provided on the attached plans. Bedding for the stone fill will consist of natural ground excavated to the proposed underside of the stone fill.

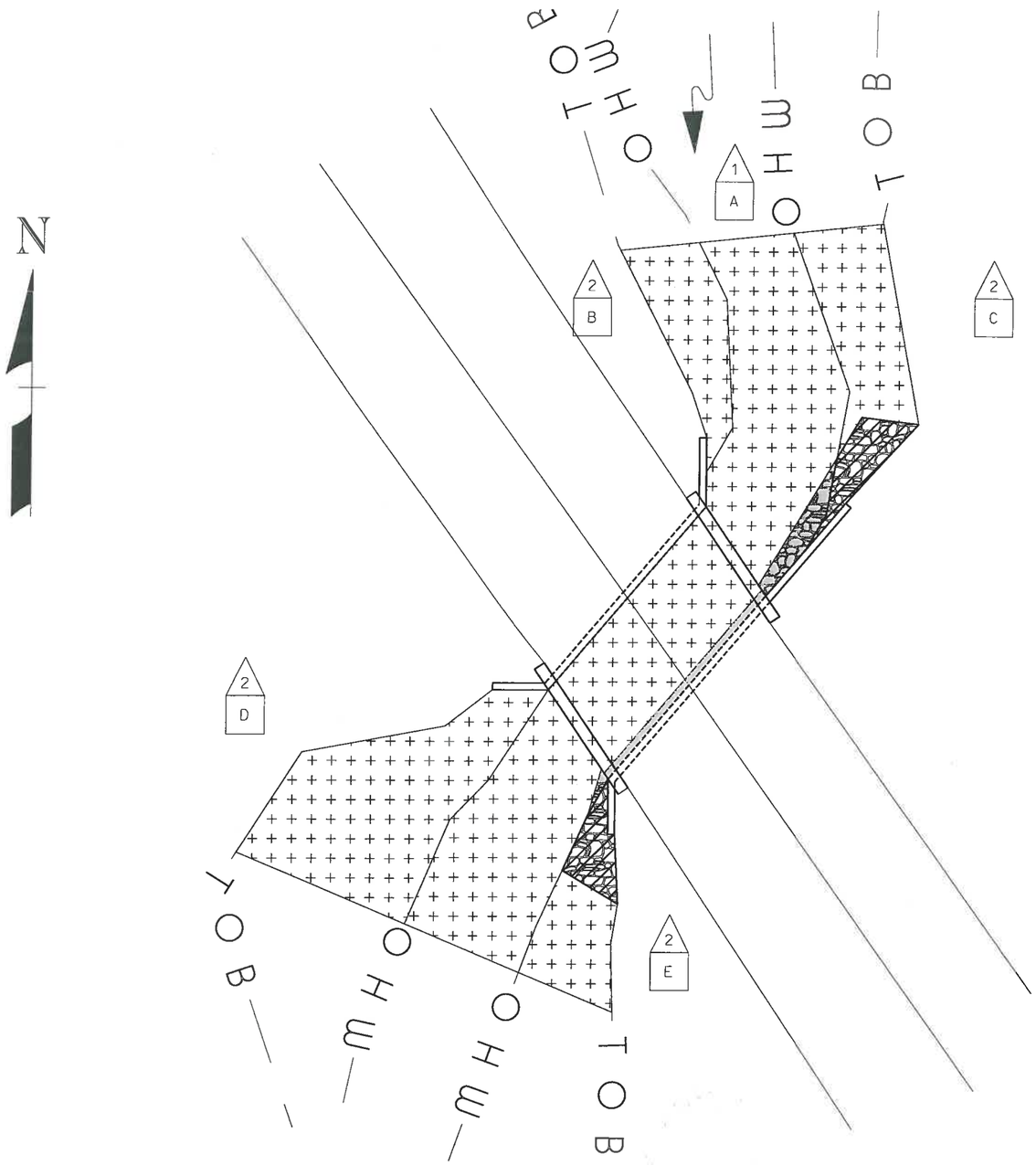
(b) (6) Enclosed are plan sheets to sufficiently indicate the relationship of the project to fixed points of reference, abutting properties, and features of the natural shoreline.

(b) (7) Stone fill is recommended for the limits shown on the attached plans to protect the banks from erosion during flood flows, from scour during all flows, and slopes greater than 2:1 have difficulty supporting vegetation.

(c) This project is not located adjacent to a great pond or water body where the state holds fee simple ownership.

(d) Stone fill is proposed to extend down to and adequately keyed into the channel bottom to prevent possible undermining of the slope.

(e) The enclosed plan has been stamped by a professional engineer.



WETLAND IMPACTS

SCALE: 1" = 20'-0"

10 0 10 20

SCALE IN FEET

SEDIMENT BASIN

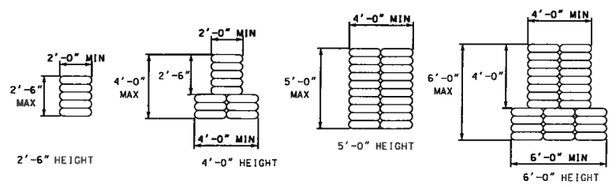
RRIPRAP	
NEW HAMPSHIRE WETLANDS BUREAU (PERMANENT NON-WETLAND)	
NEW HAMPSHIRE WETLANDS BUREAU & ARMY CORP OF ENGINEERS (PERMANENT WETLAND)	
TEMPORARY IMPACTS	

RIPRAP GRADATION

D15 < 11"

D50 < 14"

D100 < 24"



COFFERDAM DETAILS

NOT TO SCALE

STATE OF NEW HAMPSHIRE - PROFESSIONAL ENGINEER - TIMOTHY MAIN BOODEY No. 12189 LICENSED

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE

TOWN DIXVILLE BRIDGE NO. 206/101 STATE PROJECT 42398

LOCATION NH 26 OVER FLUME BROOK

WETLAND IMPACT PLAN

BRIDGE SHEET 1 OF 3

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
	DESIGNED	DBL	3/15/19	CHECKED	
	DRAWN	DBL	3/15/19	CHECKED	
	QUANTITIES			CHECKED	

FILE NUMBER DIXVILLE 206/101

ISSUE DATE	FISCAL YEAR	CREW	SHEET NO.	TOTAL SHEETS
REV. DATE	2012	01	1	3

Dixville 206/101

WETLAND IMPACT SUMMARY

WETLAND NUMBER	WETLAND CLASSIFICATION	LOCATION	AREA IMPACTS						LINEAR STREAM IMPACTS FOR MITIGATION		
			PERMANENT				TEMPORARY		PERMANENT		
			N.H.W.B. (NON WETLAND)		N.H.W.B. & A.C.O.E. (WETLAND)				BANK LEFT	BANK RIGHT	CHANNEL
			SF	LF	SF	LF	SF	LF	LF	LF	LF
1	R2UB12	A			89	65	1739	118			
2	BANK	B					245	35			
2	BANK	C	82	21			313	34			
2	BANK	D					694	40			
2	BANK	E	70	15			179	16			
		TOTAL	152	36	89	65	3170	243	0	0	0

PERMANENT IMPACTS: 241 SF
TEMPORARY IMPACTS: 3170 SF

TOTAL IMPACTS: 3411 SF

SUBTOTALS		PERMANENT				TEMPORARY	
		N.H.W.B. (NON WETLAND)		N.H.W.B. & A.C.O.E. (WETLAND)			
CLASS	DESCRIPTION	SF	LF	SF	LF	SF	LF
R2UB12	RIVERINE	0	0	89	65	1739	118
BANK	BANK	152	36	0	0	1431	125

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE

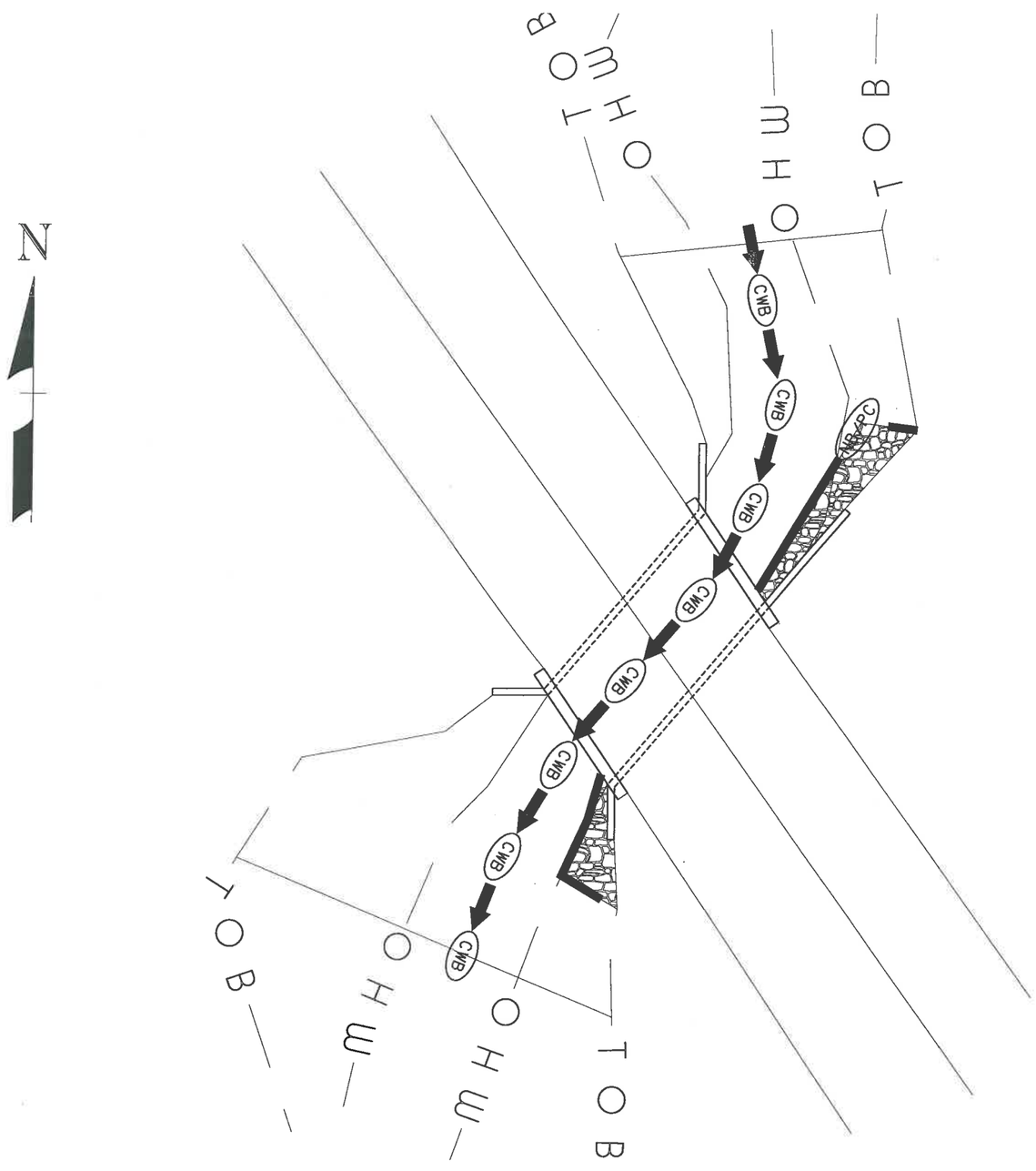
TOWN DIXVILLE BRIDGE NO. 206/101 STATE PROJECT 42398
LOCATION NH 26 OVER FLUME BROOK

WETLAND IMPACT PLAN

BRIDGE SHEET 2 OF 3

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
	DESIGNED DBL	3/15/19	CHECKED		
	DRAWN DBL	3/15/19	CHECKED		
	QUANTITIES		CHECKED		
	ISSUE DATE	FISCAL YEAR 2012	CREW 01	SHEET NO. 2	
	REV. DATE				

FILE NUMBER DIXVILLE 206/101
TOTAL SHEETS 3



EROSION CONTROL PLANS

SCALE: 1" = 20'-0"

EROSION CONTROL PLAN LEGEND

PC — PERIMETER CONTROL

SILT FENCE
EROSION CONTROL MIX BERM
EROSION CONTROL MIX SOX
TURBIDITY CURTAIN
SHEET PILE
COFFER DAM

NB/PC — NATURAL BUFFER/PERIMETER CONTROL

SILT FENCE
EROSION CONTROL MIX BERM
EROSION CONTROL MIX SOX
TURBIDITY CURTAIN
SHEET PILE
COFFER DAM

CP — CHANNEL PROTECTION

STONE CHECK DAMS
STRAW WATTLES
CHANNEL MATTING
CLASS D EROSION STONE
CLASS C STONE

CWB — CLEAN WATER BYPASS

PUMP THROUGH PIPE
DRAIN THROUGH PIPE OR CHANNEL

STATE OF NEW HAMPSHIRE
TIMOTHY MAIN BOODEY
No. 12189
LICENSED
PROFESSIONAL ENGINEER

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE MAINTENANCE

TOWN DIXVILLE — BRIDGE NO. 206/101 — STATE PROJECT 42398

LOCATION NH 26 OVER FLUME BROOK

EROSION CONTROL PLANS

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
DESIGNED	DBL	3/15/19	CHECKED		
DRAWN	DBL	3/15/19	CHECKED		
QUANTITIES		.	CHECKED		
ISSUE DATE		FISCAL YEAR 2012	CREW 01	SHEET NO. 3	
REV. DATE					

BRIDGE SHEET 3 OF 3
FILE NUMBER DIXVILLE 206/101
TOTAL SHEETS 3